

In the claims:

Claims 1-130. Cancelled.

131. (New) A data output service system for rendering at an output device output content managed from a mobile information apparatus, the mobile information apparatus being distinct and separate from the output device, the system comprising:

means for delivering from the mobile information apparatus a document object and an output device object to a server application operated on a server over a network that is distinct from the information apparatus and the output device, the document object relating to the output content and the output device object having one or more attributes corresponding to the output device;

means for generating at the server with the server application device dependent output data related to the output device for rendering the output content; and

means for delivering the output data to the output device for rendering the output content.

132. (New) The system of claim 131 further comprising means for obtaining payment information from the information apparatus as payment for the data output service provided at the output device or as payment for receiving the output data from the server.

133. (New) The system of claim 131 in which the means for delivering the document object and the output device object to the server application includes the document object and the output device object being delivered from the mobile information apparatus to the server application.

134. (New) The system of claim 133 in which the means for delivering the output data to the output device also receives at the mobile information apparatus the output data from the server application and delivers the output data to the output device.

135. (New) The system of claim 133 in which the output device includes a display output control unit for displaying data content.

136. (New) The system of claim 131 in which the output device is a printer and the output data includes one or more of an image data, a graphics data, and text data.

137. (New) The system of claim 131 in which the mobile information apparatus is a wireless mobile information apparatus and includes one or more of a palmtop computer, a handheld computer, a laptop computer, a personal digital assistance(PDA), a smart phone, a screen phone, Internet pad, internet appliance, and a digital camera.

138. (New) The system of claim 132 in which the payment information is provided automatically by the mobile information apparatus.

139. (New) The system of claim 132 in which the payment information is provided through the mobile information apparatus as entered by a user in response to a prompt to enter payment information.

140. (New) The system of claim 132 in which the payment information includes service subscriber information corresponding to a pre-arranged subscription to the data output service system.

141. (New) The system of claim 140 further comprising correlating the data output service subscriber information with a subscriber database that stores subscriber profiles with subscription payment information.

142. (New) The system of claim 131 further comprising obtaining authentication information from the mobile information apparatus to authenticate permission for the information apparatus to access the data output service.

143. (New) The system of claim 131 further comprising means for establishing a communication channel between the information apparatus and the server application, the communication channel including one or more of an Internet, a local area network, a cellular network, and a wide area network.

144. (New) The system of claim 131 in which the output device is an audio output device and the output data includes audio data.

145. (New) The system of claim 131 in which the output device is a display device and the output data includes one or more of an image data, an audio data, and a video data.

146. (New) The system of claim 131 in which the document object includes a reference or pointer related to the data content.

147. (New) The system of claim 131 in which the output device object includes an indication of a data form or data format that is acceptable as input to the output device for rendering the output content.

148. (New) A method for generating a device dependent output data acceptable for rendering at a selected output device, the device dependent output data corresponding to output content accessible at least partly by a mobile information apparatus, the method comprising:

delivering from the mobile information apparatus at least part of a document object and at least part of an output device object to a server over a network, the server being distinct from the mobile information apparatus and the output device, the document object being associated with the output content and the output device object having one or more device dependent attributes corresponding to the selected output device;

generating at the server device dependent output data related to output content and acceptable for rendering at the selected output device; and

delivering the output data from the information apparatus to the selected output device for rendering of the output content.

149. (New) The method of claim 148 further comprising establishing a communication channel between the mobile information apparatus and the selected output device; and

receiving at the mobile information apparatus over the communication channel one or more attributes corresponding to the selected output device.

150. (New) The method of claim 148 in which the server includes a computing device in a network and the network includes one or more of an Internet, a local area network, a cellular network, and a wide area network.

151. (New) The method of claim 148 in which the generating of the output data includes at least partially one or more of a conversion operation and a raster image processing operation.

152. (New) The method of claim 148 further comprising discovering the selected output device as one of one or more output devices that are discovered by the mobile information apparatus as being available for rendering the output content.

153. (New) The method of claim 148 in which the document object includes the output content.

154. (New) The method of claim 148 in which the document object includes a pointer or reference related to the output content.

155. (New) The method of claim 148 in which the server obtains the output content based on a pointer or reference to the output content included in the document object.

156. (New) The method of claim 148 in which the mobile information apparatus is a wireless mobile information apparatus and the mobile information apparatus includes one or more of a palmtop computer, a handheld computer, a laptop computer, a personal digital assistance(PDA), a smart phone, a screen phone, Internet pad, internet appliance, and a digital camera.

157. (New) A method for generating device dependent output data acceptable for rendering at each of one or more selected output devices, the device dependent output data for each selected output device corresponding to an output content accessible at least partly by a mobile information apparatus, the method comprising:

establishing a communication channel between the mobile information apparatus and one or more output devices;

receiving at the mobile information apparatus over the communication channel one or more attributes corresponding to one or more output devices;

selecting at the mobile information apparatus one or more output devices for rendering the output content;

delivering from the mobile information apparatus at least partially a document object and one or more output device objects to one or more servers over a network, the one or more servers being distinct from the mobile information apparatus and the one or more selected output devices, the document object being associated with the output content, and the one or more output device objects having one or more attributes corresponding to each of the one or more selected output devices; and

generating at the one or more servers device dependent output data associated with each of the corresponding one or more selected output devices.

158. (New) The method of claim 157 in which the one or more servers are connected to a computer network that includes the Internet.

159. (New) The method of claim 157 in which the generating of the output data for each selected output device includes one or more of invoking, launching, calling, utilizing, and involving one or more applications.

160. (New) The method of claim 157 in which the generating of the output data for each selected output device includes at least partially one or more of a conversion operation and an raster image processing operation.

161. (New) The method of claim 157 further comprising discovering with the mobile information apparatus one or more output devices as being available for rendering the output content.

162. (New) The method of claim 157 in which the document object includes the output content.

163. (New) The method of claim 157 in which the document object includes a pointer or reference related to the output content.

164. (New) The method of claim 157 in which the one or more servers obtain the document object based on the pointer or reference to the output content included in the document object.

165. (New) The method of claim 157 further comprising delivering the device dependent output data to each selected output device for rendering of the output content.

166. (New) The method of claim 157 further comprising receiving at the mobile information apparatus device dependent output data for rendering at each selected output device.

167. (New) A data output method for rendering at a selected output device output content from a mobile information apparatus, comprising:

establishing a communication channel between the mobile information apparatus and the selected output device;

establishing a communication channel between the mobile information apparatus and a server over a network;

delivering from the mobile information apparatus at least part of a document object and at least part of an output device object to the server, which is distinct from the mobile information apparatus and the output device, the document object being associated with the output content and the output device object including at least an indication related to a form or format that is acceptable for rendering at the selected output device;

receiving at the mobile information apparatus device dependent output data from the server, the output data being related to the output content and acceptable for rendering at the selected output device; and

delivering the device specific output data from the mobile information apparatus to the selected output device for rendering the output content.

168. (New) The method of claim 167 comprising obtaining an output device object at the mobile information apparatus, the obtaining of the output device object including one or more of obtaining information from a user input,

from a communication with the selected output device, and from a default parameter or preference.

169. (New) The method of claim 167 further comprising discovering the selected output device as one of one or more output devices that are discovered by the mobile information apparatus as being available for rendering the output content.

170. (New) The method of claim 167 further comprising selecting an output device compatible for receiving the output data.

171. (New) The method of claim 167 further comprising conforming at the mobile information apparatus the output data into a form more suitable for rendering at the selected output device.

172. (New) A system for generating a device dependent output data acceptable for rendering at an output device, the device dependent output data corresponding to output content accessible at least partly by a mobile information apparatus, comprising:

a server that is distinct from the mobile information apparatus and the output device, the server being operable to receive a document object and at least part of an output device object, the document object being associated with the output content and the output device object having one or more attributes corresponding to the output device; and

a server application on the server for receiving the document object and at least part of the output device object and for generating the device dependent output data in a form or format that is acceptable to the output device; and

means for delivering the device dependent output data to the output device for rendering of the output content.

173. (New) The system of claim 172 further comprising means for establishing a communication channel between the information apparatus and the server application, and the communication channel including one or more of an Internet, a local area network, a cellular network, and a wide area network.

174. (New) The system of claim 172 in which the output device includes an audio output device and the output data includes audio data.

175. (New) The system of claim 172 in which the output device includes a display device and the output data includes one or more of an image data, an audio data, and a video data.

176. (New) The system of claim 172 in which the output device includes a printing device and the output data includes one or more of an image data, a graphics data, and a text data.

177. (New) A system for generating device dependent output data acceptable for rendering at each of one or more selected output devices, the device dependent output data for each selected output device corresponding to an output content accessible at least partly by a mobile information apparatus, comprising:

a server that is accessible over a network and is distinct from the mobile information apparatus and the one or more selected output devices, the server being operable for receiving from the mobile information apparatus one or more document objects and one or more output device objects, the one or more document objects being associated with the output content and the one or more output device objects having one or more attributes corresponding to the one or more selected output devices;

means for establishing a communication channel between the server and the mobile information apparatus at least in part over an Internet; and

a server application operating at the server for generating device dependent output data associated with each of the corresponding one or more selected output devices; and

means for delivering the device dependent output data to the mobile information apparatus over the communication channel.

178. (New) The system of claim 177 further comprising means for delivering the device dependent output data the mobile information apparatus to one or more selected output devices for rendering of the output content.

179. (New) The system of claim 177 in which each output device includes one of a display device and an audio output device and the output data including audio data.

180. (New) In a computer readable medium, client software operable from a mobile information apparatus for generating device dependent output data acceptable for rendering at a selected output device, the device dependent output data corresponding to output content accessible at least partly by the mobile information apparatus, the medium comprising:

software for delivering from the mobile information apparatus at least part of a document object and at least part of an output device object to a server that is distinct from the mobile information apparatus and the output device, the document object being associated with the output content and the output device object having one or more device dependent attributes corresponding to the selected output device, the document object and the output device object being required at the server for generating device dependent output data corresponding to the output content and acceptable for rendering at the selected output device;

software for receiving at the mobile information apparatus the output data for rendering at the selected output device; and

software for delivering the output data from the mobile information apparatus to the selected output device for rendering of the output content.

181. (New) The medium of claim 180 further comprising software for establishing communication between the mobile information apparatus and one or more output devices.

182. (New) The medium of claim 180 further comprising software for establishing a communication channel between the mobile information apparatus

and the server, the communication channel including one or more of an Internet, a local area network, a cellular network, and a wide area network.

183. (New) The medium of claim 180 in which the information apparatus is a wireless mobile information apparatus and includes one or more of a palmtop computer, a handheld computer, a laptop computer, a personal digital assistance (PDA), a smart phone, a screen phone, Internet pad, internet appliance, and a digital camera.

184. (New) The medium of claim 180 in which the output device being one of a display device and an audio output device and the output data includes audio data.

185. (New) The medium of claim 180 in which the output device includes a printer and the output data include one or more of an image data, a graphics data, and text data.

186. (New) The medium of claim 180 further comprising software for obtaining payment information at the mobile information apparatus as payment for receiving the output data corresponding to the output content.

187. (New) The medium of claim 181 in which the communication channel is a wireless communication channel and the medium further comprises software for discovering the one or more output devices over the wireless communication channel.

189. (New) The system of claim 177 in which the communication channel between the mobile information apparatus and one or more output devices includes a wireless communication channel.

190. (New) The system of claim 177 in which the output device includes a printing device and the output data includes one or more of an image data, a graphics data, and a text data.

191. (New) The system of claim 177 in which the document object includes a reference or pointer related to the data content.

192. (New) The system of claim 177 in which generating device dependent output data at the server includes retrieving data content employing the document object.

193 (New) The system of claim 172 in which the document object includes a reference or pointer related to the data content.

194 (New) The system of claim 172 further comprising means for retrieving data content employing the document object.

195 (New) The method of claim 167 further comprising obtaining payment information at the mobile information apparatus as payment for receiving the output data corresponding to the output content.

196 (New) The method of claim 167 further comprising obtaining a document object at the mobile information apparatus, including a user selecting at least a pointer or reference to a data content.

197 (New) The method of claim 167 in which the communication channel between the mobile information apparatus and the server includes one or more of an Internet, a local area network, a cellular network, and a wide area network.

198 (New) The method of claim 167 in which the communication channel between the mobile information apparatus and the selected output device includes a wireless communication channel and the method further comprises discovering the one or more output device over the wireless communication channel.

199 (New) The method of claim 167 in which the mobile information apparatus is a wireless mobile information apparatus and the information apparatus includes one or more of a palmtop computer, a handheld computer, a laptop computer, a personal digital assistance(PDA), a smart phone, a screen phone, Internet pad, internet appliance, and a digital camera.

200 (New) The method of claim 157 in which the communication channel includes a wireless communication channel and the method further comprises

discovering the one or more output device over the wireless communication channel.